

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A PVC switching control method for controlling a PVC connection in an ATM communication network, comprising ~~the steps of:~~
setting a plurality of PVC connections and individually corresponding controlling connections between two ATM exchanges of the ATM communication network; ~~[[and]]~~
detecting, by each of the ATM exchanges, occurrence of ~~[[and]]~~ or release from a trouble with ~~and of~~ a PVC connection ~~corresponding to any of~~ through the corresponding controlling ~~connections~~ connection; and
switching an operative PVC connection to another one of the PVC connections in response to a result of the detection.

2. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 1, wherein, if, while one of the PVC connections is used as ~~[[the]]~~ a currently used PVC connection, it is detected from the corresponding controlling connection that a trouble has occurred with the currently used PVC connection, then each of the ATM exchanges switches the operative PVC connection to another one of the PVC connections as a bypassing PVC connection.

3. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 2, wherein, if, while the bypassing PVC connection is used, it is detected that the currently

used PVC connection has been released through the corresponding controlling connection, then each of the ATM exchanges switches the operative PVC connection to the currently used PVC connection.

4. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 1, wherein the controlling connections are set by an operation administration and maintenance function.

5. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 4, wherein each of the ATM exchanges detects a trouble through ~~the fact that~~ receipt of an alarm indication signal cell ~~[[of]]~~ from the operation administration and maintenance function is ~~inputted thereto.~~

6. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 4, wherein each of the ATM exchanges detects a trouble through ~~the fact that~~ failure to receive a continuity check cell ~~[[of]]~~ from the operation administration and maintenance function is ~~not inputted thereto.~~

7. (currently amended) A PVC switching control method for controlling a PVC connection in an ATM communication network, comprising ~~the steps of:~~

setting a master PVC connection and a master side operation administration and maintenance (OAM) connection corresponding to the master PVC connection between a first ATM exchange and a second ATM exchange;

setting a bypassing PVC connection prepared in advance for bypassing of the master PVC connection and a bypassing side ~~operation administration and maintenance~~ OAM connection corresponding to the bypassing PVC connection between the first and second ATM exchanges; and

switching, if both of the first and second ATM exchanges detect a trouble of the master PVC connection through the ~~maser master side operation administration and maintenance~~ OAM connection, the master PVC connection to the bypassing PVC connection ~~by means of~~ at the first and second ATM exchanges.

8. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 7, wherein, if, while the first and second ATM exchanges use the bypassing PVC connection, the first and second ATM exchanges detect a release of the master PVC connection through the master side OAM connection, each of the first and second ATM exchanges switches the PVC connection to the master PVC connection.

9. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 7, wherein a plurality of repeating ATM exchanges are connected on a route of the bypassing PVC connection and a connection for forming the bypassing ~~[[PCV]]~~ PVC connection is set in each of the repeating ATM exchanges.

10. (currently amended) ~~[[A]]~~ The PVC switching control method as claimed in claim 9, wherein each of the first and second ATM exchanges designates ~~[[the]]~~ a connection set in advance and signals an ATM cell to a neighboring one of the plurality of repeating ATM exchanges through the designated connection.

11. (new) A PVC switching control system for controlling a PVC connection in an ATM communication network, comprising:

means for setting a plurality of PVC connections and corresponding controlling connections between first and second ATM exchanges of the ATM communication network;

means for detecting, by each of the first and second ATM exchanges, occurrence of or release from a trouble with a PVC connection based on information from the corresponding controlling connection; and

means for switching an operative PVC connection to another one of the PVC connections in response to a result of the detection.

12. (new) The PVC switching control system of claim 11, wherein the controlling connections include operation administration and maintenance (OAM) connections to provide one of an alarm signal or a continuity check signal.

13. (new) The PVC switching control system of claim 11, wherein, if, while one of the PVC connections is used as a currently used PVC connection, it is detected from the

corresponding controlling connection that a trouble has occurred with the currently used PVC connection, then each of the first and second ATM exchanges switches the operative PVC connection to another one of the PVC connections as a bypassing PVC connection.

14. (new) The PVC switching control system of claim 13, wherein, if, while the bypassing PVC connection is used, it is detected that the currently used PVC connection has been released through the corresponding controlling connection, then each of the first and second ATM exchanges switches the operative PVC connection to the currently used PVC connection.

15. (new) The PVC switching control system of claim 11, wherein the controlling connections are set by an operation administration and maintenance (OAM) function.

16. (new) The PVC switching control system of claim 15, wherein each of the first and second ATM exchanges detects trouble via receipt of an alarm indication signal cell from the OAM function.

17. (new) The PVC switching control system of claim 15, wherein each of the first and second ATM exchanges detects trouble via failure to receive a continuity check cell from the OAM function.

18. (new) A first ATM exchange in an ATM network, comprising:

means for setting a master PVC connection and a master side operation administration and maintenance (OAM) connection corresponding to the master PVC connection between the first ATM exchange and a second ATM exchange;

means for setting a bypassing PVC connection prepared in advance for bypassing of the master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between the first and second ATM exchanges;

means for detecting a trouble of the master PVC connection through the master side OAM connection; and

means for switching the master PVC connection to the bypassing PVC connection if a trouble of the master PVC connection is detected.